REMARKS

I. Status of the Claims

Claims 37, 40-42, 45, 47-49, 63 and 64 were pending and examined in the June 22, 2010 Office Action. With this Reply, claims 41, 45, 46, 49, 63 and 64 are amended. The amendments are made without prejudice or disclaimer and provide no new matter. Claims 37, 40-42, 45, 47-49, 63 and 64 are presented for reconsideration.

II. Rejections under 35 U.S.C. § 103

Claims 37, 40-42, 45, 47-49 and 63-64 are rejected under 32 U.S.C. 103(a) as being unpatentable over Ogawa et al. (US Patent 5,861,520) in view of Motoki et al. (Biol Pharm. Bull. 1995, 18:1487-1491) in further view of Lin et al.(US Patent 6,043,339). The Office Action asserts that both Motoki et al. and Ogawa et al. teach treatment with glycolipids that are mammalian intermediary metabolites, where Motoki et al. teach that the glycolipids are immunostimulatory and Ogawa et al. teach the use of glycolipids to inhibit viral infections. The Office Action asserts that Lin et al. teach *ex vivo* administration of glycolipids. Applicants respectfully request reconsideration and withdrawal of this rejection in light of the following comments.

Motoki et al. describe lymphocyte proliferation in FIGS. 2 and 3. However, the skilled artisan would understand that the ability of a compound to stimulate proliferation does not necessarily indicate the effectiveness of that compound as an anti-cancer reagent.

Neither Motoki et al. nor Ogawa et al. teach or suggest treatment of cancer, a viral infection or an autoimmune disease with a mammalian intermediary metabolite. Regarding Ogawa et al., the Action asserts "Ogawa et al. also establishes that it is known that glycolipids play a role as a receptor in the host side in the infection with bacteria and viruses. [Lines 55-61, column 1, in particular.] Based on this knowledge, Ogawa et al. discloses the use of glycolipids to inhibit viral infections. Thus, at the time

the invention was made, Ogawa et al. establishes that glycolipids have antiviral activities." The cited portion of Ogawa et al. states:

> It is known that this sphingoglycolipid closely relates to receptor functions for physiologically active substances and important cell functions, such as generation, proliferation, differentiation or immune reactions, via intercellular recognition and interactions. It is also known that this sphingoglycolipid plays a role as a receptor in the host side in the infection with bacteria or viruses.

It is unclear to Applicants how the above passage would teach the skilled artisan that glycolipids could be used to inhibit or treat a viral infection. The mere fact that glycolipids may be involved in viral infection does not teach the skilled artisan that administration of such a substance will have any particular effect *per se*. The passage does not state or suggest, or even point to a reference that states or suggests that any mammalian intermediary metabolite could have antiviral activity or could be used to inhibit or treat a viral infection. The passage merely states that sphingoglycolipids play a role in host receptors for bacteria and virus infections. Nowhere in that passage, or anywhere else in Ogawa et al., would lead the skilled artisan to conclude that sphingoglycolipids are useful as antiviral agents.

Based on the above discussion, neither Motoki et al. nor Ogawa et al., alone or in combination, teach or suggest treatment of cancer, a viral infection or an autoimmune disease with a mammalian intermediary metabolite. Lin et al. also does not teach or suggest any treatment with a glycolipid mammalian intermediary metabolite. The cited combination of references thus does not teach or suggest all elements of the instant claims. As such, the combination of references do not make the instant claims obvious. Withdrawal of the rejection under 35 U.S.C. 103(a) is therefore respectfully requested.

III. Conclusion

In view of the foregoing remarks, Applicants respectfully request withdrawal of the rejections of record and examination of withdrawn claim 46 as depending from generic claim 37.

Applicants authorize the United States Patent and Trademark Office to charge all fees required to maintain pendency of this application, including the extension of time and Request for Continued Examination fees, to Deposit Account No. 05-1135.

If a telephone conversation would further the prosecution of the present application, Applicants' undersigned attorney requests that he be contacted at the number provided below.

Respectfully submitted,

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